

H. S. John.

Rhodora

JOURNAL OF THE
NEW ENGLAND BOTANICAL CLUB

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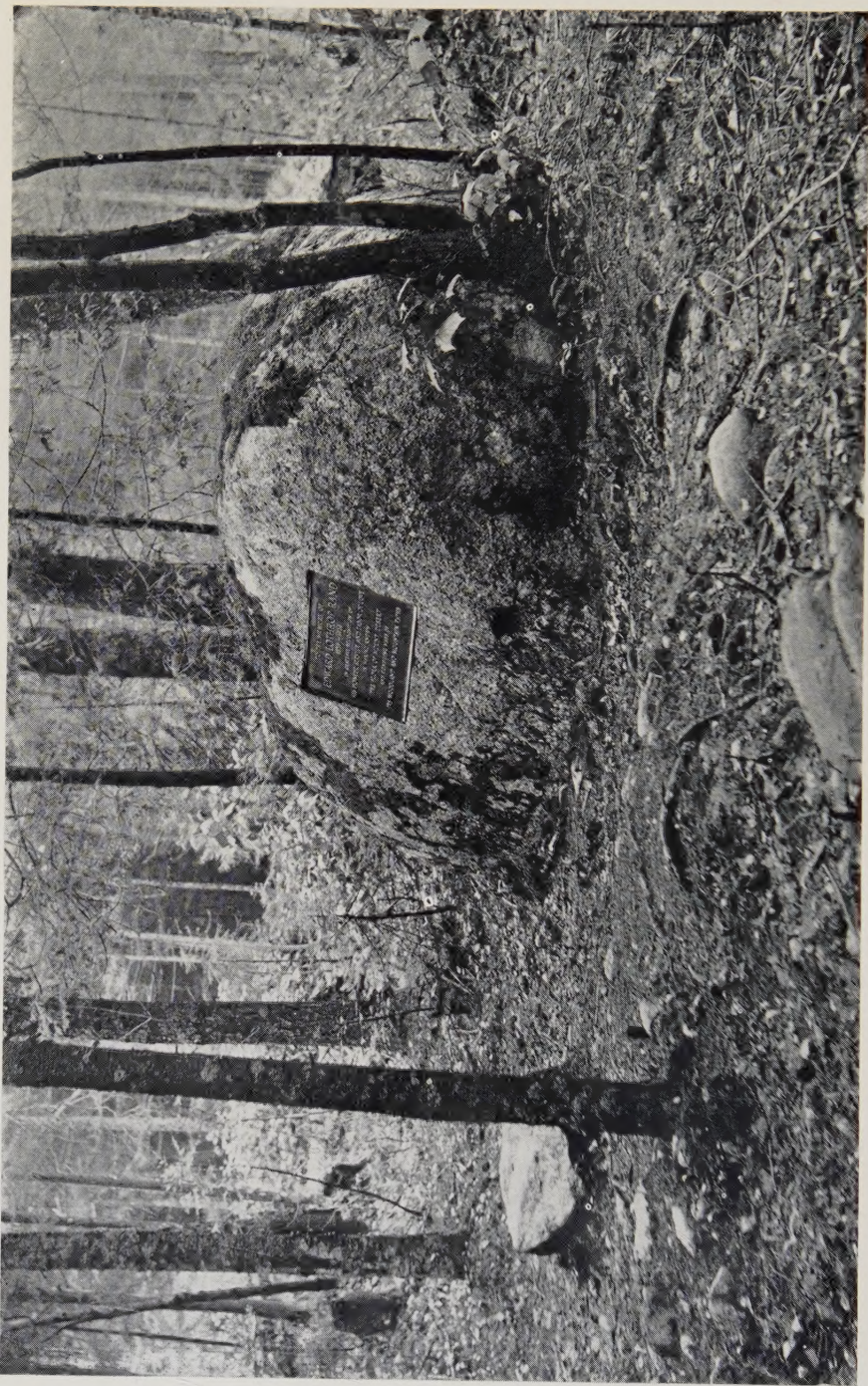
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BOULDER ON JORDAN POND TRAIL WITH MEMORIAL TABLET TO EDWARD LOTHROP RAND

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FURTHER ADDITIONS TO THE MT. DESERT FLORA.

G. L. STEBBINS, JR.

(Plates 185 and 186)

THE island of Mt. Desert, on the Maine coast, has probably been visited by more botanists than any other equal area in the state, but by far the most thorough botanizing of this famous resort was done by Edward L. Rand. After the publication of the Rand and Redfield flora of the island, a catalogue admittedly incomplete, Mr. Rand collected extensively on Mt. Desert and the adjacent islands until 1920, and at his death in 1924, these collections, about 7000 unmounted and unnamed sheets, were left to the New England Botanical Club.

In recognition of his work, his friends, in particular Professor Horatio N. Reynolds, of New Haven, erected a tablet to his memory near Seal Harbor, in the woods which he knew and loved so well, and on the trail, that from Seal Harbor to Jordan Pond, which he travelled most in his collecting trips. Members of the New England Botanical Club and other readers of RHODORA will be interested in the photographs of this memorial, here reproduced (PLATES 185 and 186) through the generosity of one of Mr. Rand's life-long friends.

It has been the writer's pleasure for the past two years to study and identify Mr. Rand's later collection, which proved to contain many interesting additions to the varied flora of this remarkable island. Its flora is probably even yet not completely known, as is evidenced by the number of new discoveries that the writer himself has made during the past three summers.

A list of the plants in the Rand herbarium not previously reported from the island, together with a few of the writer's own collections (indicated by his initials) follows. The area in which Mr. Rand made his later collections was increased over that of the flora by the addition of Great Gott Island, a part of Long Island Plantation immediately adjoining Mt. Desert on the south, and species from this island have therefore been included among the additions to the Mt. Desert flora. A few casual garden escapes, which have plainly failed to become permanent additions to the island flora, have been omitted from this list. When collections were not made by Mr. Rand himself, the name of the collector is given.

ASPLENIUM TRICHOMANES L. Crevices in cliffs, very rare and local. Newport Mt.; Cadillac Cliffs; Barr Hill (*H. N. Reynolds*).

ATHYRIUM ANGUSTUM (Willd.) Presl. var. LAURENTIANUM Butters. Pemetic Mt.

BOTRYCHIUM ANGUSTISEGMENTUM (Pease & Moore) Fernald. Woods, Seal Harbor (*H. N. Reynolds*).

BOTRYCHIUM VIRGINIANUM (L.) Sw. Damp woods, Hunter's Brook Valley (*G. L. S., Jr.*).

[EQUISETUM PALUSTRE L. Erroneously recorded from Jordan Stream in "Wild Flowers of Mt. Desert Island" by E. T. Wherry through a misidentification by the writer.]

LYCOPODIUM ANNOTINUM L. var. ACRIFOLIUM Fernald. Little Harbor Brook Valley.

ISOETES MACROSPORA Dur. Somes Stream.

PICEA MARIANA (Mill.) BSP. Frequent in sphagnum heaths.

TRIGLOCHIN PALUSTRIS L. Salt marsh, Baker Island.

DIGITARIA ISCHAEMUM Schreb. Wildwood Farm, Seal Harbor.

ANDROPOGON SCOPARIUS Michx. var. FREQUENS Hubbard. Jordan Bluffs (*G. L. S. Jr.*); Shore Path, Seal Harbor (*G. L. S. Jr.*).

PANICUM MILIACEUM L. Seal Harbor.

PANICUM LINEARIFOLIUM Scribn. var. WERNERI (Scribn.) Fernald. Shore Path, Seal Harbor.

PHALARIS ARUNDINACEA L. Baker Island.

ORYZOPSIS PUNGENS (Torr.) Hitchc. Dry woods south of Picket Mt. (*G. L. S. Jr.*).

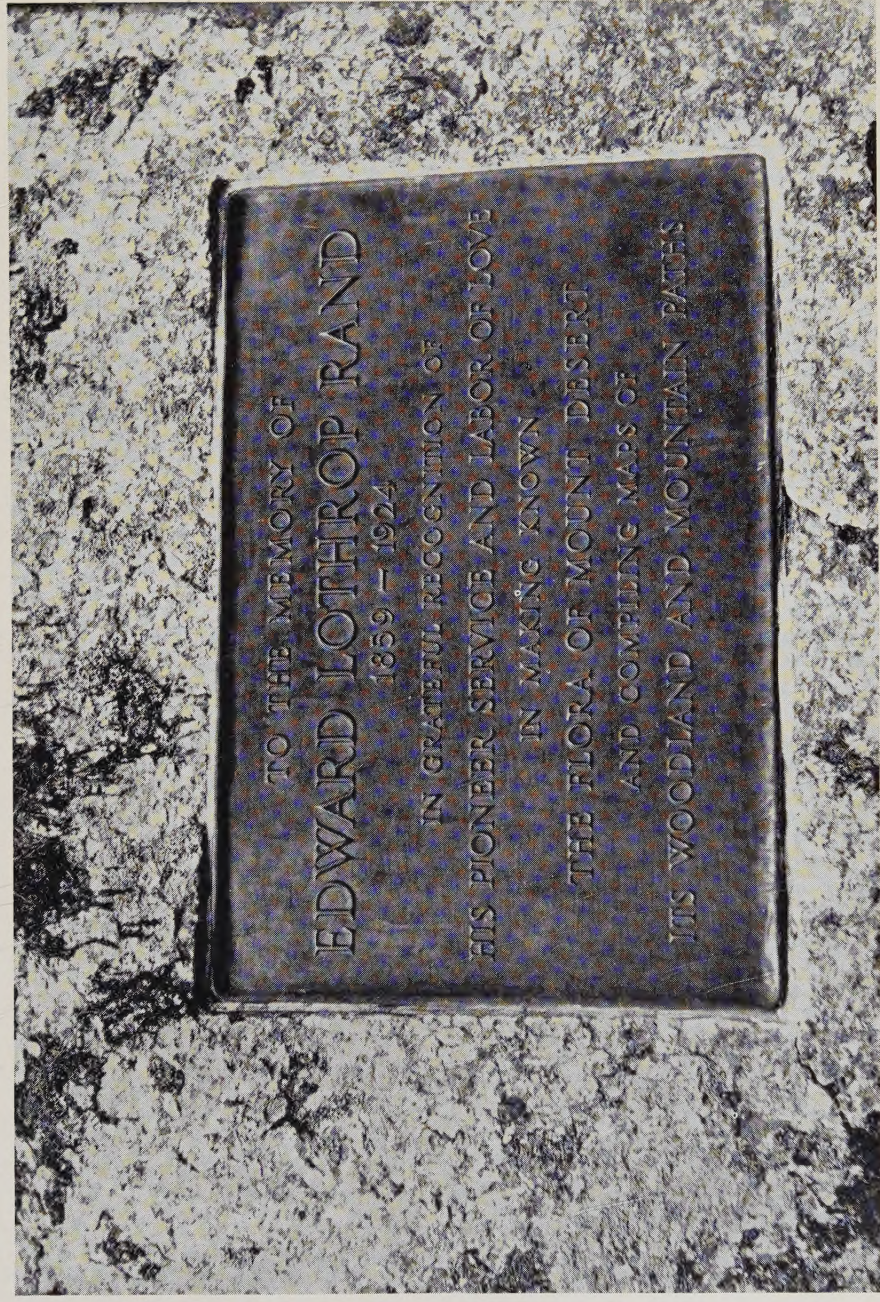
AMMOPHILA BREVILIGULATA Fernald. Sand Beach, near Great Head.

HOLCUS LANATUS L. Roadside, Mountain Drive (*G. L. S. Jr.*).


ARRHENATHERUM ELATIUS (L.) Beauv. Roadsides, Seal Harbor (*G. L. S. Jr.*).

ERAGROSTIS MEGASTACHYA (Koeler) Link. Bracy Cove.

MELICA STRIATA (Michx.) Hitchc. Woods, Jordan Stream (*G. L. S. Jr.*).



MEMORIAL TABLET ON JORDAN POND TRAIL, MT. DESERT ISLAND



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POA SALTUENSIS Fernald & Wiegand. Not uncommon in damp woods. Wildwood Farm Path, Seal Harbor.

Var. *MICROLEPIS* Fernald & Wiegand. Bog, between the Triad and Day Mt.

PUCCINELLIA FASCICULATA (Torr.) Bickn. Salt marsh, Great Duck Island. The second station in Maine for this plant, and the only one east of York County.

FESTUCA OVINA L. Extensively introduced as a lawn and pasture grass.

FESTUCA CAPILLATA Lam. Common in woods and fields.

FESTUCA ARUNDINACEA Schreb. Well established on Upland Road, Seal Harbor (*G. L. S. Jr.*). The first station recorded in New England for this European species.

BROMUS SECALINUS L. Seal Harbor; Long Pond Meadows; Jordan Pond.

BROMUS HORDEACEUS L. Wildwood Farm, Seal Harbor (*G. L. S. Jr.*).

BROMUS RACEMOSUS L. Seal Harbor.

BROMUS COMMUTATUS Schrad. Waste lot, Bar Harbor (*G. L. S. Jr.*).

BROMUS TECTORUM L. Wildwood Farm, Seal Harbor.

LOLIUM PERENNE L. Roadside, north end of Bubble Pond (*G. L. S. Jr.*).

AGROPYRON CANINUM var. *TENERUM* (Vasey) Pease & Moore. Frequent along the shore. Also Sargent Mt.; Green Mt.

HORDEUM VULGARE var. *TRIFURCATUM* (Schlecht.) Koern. & Wern. Foot of Long Pond.

RHYNCHOSPORA CAPITELLATA (Michx.) Vahl. South shore of Bubble Pond.

CAREX VULPINOIDEA Michx. Dump, Seal Harbor. Introduced from farther south.

CAREX LAEVIVAGINATA (Kueckenthal) Mackenzie. Clement Meadow, Seal Harbor.

CAREX SALINA var. *KATTEGATENSIS* (Fries) Almq. Great Duck Island.

CAREX LIMOSA L. Great Cranberry Island; Little Cranberry Island; Ship Harbor Heath (*C. E. & E. Faxon*).

XYRIS CAROLINIANA Walt. Seal Cove Pond; Lower Breakneck Pond.

LILIUM TIGRINUM Ker. Well established on roadside, Seal Harbor (*G. L. S. Jr.*); Great Cranberry Island (*G. L. S. Jr.*).

SISYRINCHIUM GRAMINEUM Curtis. East of Hunter's Brook; roadside near Northwest Arm, Great Pond.

CYPRIPEDIUM PARVIFLORUM Salisb. Damp woods, near Jordan Stream (*Miss E. L. Shaw*). The station for var. *PUBESCENS* in the same region (*RHODORA* 10: 145) has been destroyed.

HABENARIA MACROPHYLLA Goldie. Woods, south of Bubble Pond.

- SALIX PURPUREA L. Little Cranberry Island.
 POPULUS ALBA L. Roadside, Otter Creek (*G. L. S. Jr.*).
 OSTRYA VIRGINIANA (Mill.) K. Koch. Beech Hill (*Sam Lurvey*).
 ALNUS RUGOSA (DuRoi) Spreng. Jordan Stream, near Jordan Pond (*G. L. S. Jr.*).
 CHENOPODIUM HYBRIDUM L. West shore, Great Cranberry Island.
 SILENE ANTIRRHINA L. Beech Hill.
 VAR. DIVARICATA Robinson. Seal Harbor.
 RANUNCULUS AQUATILIS L. var. CAPILLACEUS DC. Pray's Brook.
 ACTAEA RUBRA (Ait.) Willd. Woods, east of Bald Peak.
 Forma NEGLECTA (Gilman) Robinson. Woods, near Sand Beach.
 BERTEROA INCANA (L.) DC. Southwest Harbor (*Annie S. Downs*).
 ALYSSUM ALYSSOIDES L. Bar Harbor.
 LEPIDIUM APETALUM Willd. Frequent in waste places.
 LEPIDIUM CAMPESTRE (L.) R. Br. Bar Harbor.
 CAMELINA SATIVA (L.) Crantz. Near Denning Brook, Somesville.
 CAMELINA MICROCARPA Andrz. Seal Harbor.
 CONRINGIA ORIENTALIS (L.) Dumort. Near Denning Brook, Somesville; Great Cranberry Island.
 SISYMBRIUM ALTISSIMUM L. Seal Harbor; Southwest Harbor.
 ERYSIMUM CHEIRANTHOIDES L. Seal Harbor; Bar Harbor.
 ARABIS DRUMMONDI Gray. East side of Dog Mt. (*G. L. S. Jr.*).
 RESEDA ALBA L. Wildwood Farm, Seal Harbor.
 DROSEROTA ROTUNDIFOLIA var. COMOSA Fernald. Sandy shores, Jordan Pond (*G. L. S. Jr.*). The only known station in New England for this interesting variety.
 SORBARIA SORBIFOLIA (L.) R. Br. Escaped to roadside, near Oak Hill.
 AMELANCHIER BARTRAMIANA (Tausch.) Roem. Green Mt.; Great Cranberry Island.
 CRATAEGUS COLUMBIANA Howell var. BRUNETIANA (Sarg.) Eggleston. Southwest Harbor.
 CRATAEGUS ROTUNDIFOLIA Moench. Juniper Cove.
 CRATAEGUS BRAINERDI Sarg. Sand Beach, near Great Head.
 CRATAEGUS MACRACANTHA Lodd. Somesville.
 ROSA RUGOSA Thunb. Common in cultivation, and escaping to beaches. Great Cranberry Island; Baker Island; Great Gott Island.
 PRUNUS DEPRESSA Pursh. Cliffs, Jordan Mt. (*G. L. S. Jr.*); Picket Mt. (*G. L. S. Jr.*).
 PRUNUS NIGRA Ait. Somesville.
 GENISTA TINCTORIA L. Bar Harbor (*Schenck*).
 MEDICAGO SATIVA L. Seal Harbor.
 VICIA HIRSUTA (L.) S. F. Gray. Somesville.
 VICIA VILLOSA Roth. Seal Harbor (*G. L. S. Jr.*).
 APIOS TUBEROSA Moench. Bar Harbor; west shore of Great Pond.
 EUPHORBIA MACULATA L. Schooner Head Road, Bar Harbor. Probably introduced from farther south.

EUPHORBIA PEPLUS L. Weed in garden, Seal Harbor (*G. L. S. Jr.*).

ILEX VERTICILLATA var. TENUIFOLIA (Torr.) Wats. Jordan Pond; Great Cranberry Island.

Var. CYCLOPHYLLA Robinson. Jordan Mt.

Var. PADIFOLIA (Willd.) T. & G. Seal Harbor.

VIOLA RENIFOLIA Gray var. BRAINERDII (Greene) Fernald. Woods, Jordan Stream.

The "*V. blanda* var. *renifolia*" of the Rand & Redfield Flora is *V. incognita* Brainerd. *V. nephrophylla* Greene was erroneously included in Wherry's "Wild Flowers of Mt. Desert" through a misidentification of this specimen by the writer.

OENOTHERA PARVIFLORA L. Seal Harbor; near Hunter's Beach; Bracy Cove.

OENOTHERA LACINIATA Hill. Jordan Pond Road, Seal Harbor. Introduced from farther south.

OENOTHERA PRATENSIS (Small) Robinson. Seal Harbor (*Mrs. Sarah W. Boggs*). Probably introduced from farther west.

MYRIOPHYLLUM TENELLUM Bigel. Bubble Pond; Eagle Lake; Seal Cove Pond.

OSMORHIZA LONGISTYLIS (Torr.) DC. Somesville.

VACCINIUM CANADENSE forma CHIOCOCCUM Deane. Seal Harbor.

× LYSIMACHIA PRODUCTA (Gray) Fernald. Frequent in wet ground, with its parents.

LYSIMACHIA NUMMULARIA L. Escaped from garden, Somesville.

PENTAGLOTTIS SEMPERVIRENS (L.) Tausch. Seal Harbor. The only reported occurrence of this European species in North America, but probably only a casual introduction, as careful search has failed to reveal it in recent years.

VERBENA HASTATA L. Duck Brook Meadows.

VERBASCUM PHLOMOIDES L. Head of Northeast Harbor.

LINARIA REPENS Mill. Great Cranberry Island. Probably an escape, not seen in recent years.

PLANTAGO MAJOR L. var. INTERMEDIA (Gilibert) Dcne. Salt marshes, Great Cranberry Island; Little Cranberry Island; Baker Island.

Var. ASIATICA (L.) Dcne. Woods, Seal Harbor.

No specimen of *P. Rugelii* Dcne. was found in the Rand Herbarium, and it is likely that his report of this species (*RHODORA* 10: 145) was based on the specimen here cited.

ASTER NOVAE-ANGLIAE L. Escaped from cultivation, Bar Harbor.

ANTENNARIA PARLINII Fernald. Somesville.

ANTENNARIA CANADENSIS Greene. Seal Harbor (*Mrs. Sarah W. Boggs*).

Var. RANDII Fernald. Common.

- ANTENNARIA PLANTAGINIFOLIA (L.) Richards. Southwest Harbor.
 ANTENNARIA FALLAX Greene. Somesville.
 ANTENNARIA OCCIDENTALIS Greene. Roadside near High Head.
 ANTENNARIA NEODIOICA Greene. Seal Harbor; Somesville.
 Var. GRANDIS Fernald. Somesville.
 Var. ATTENUATA Fernald. Common.
 Var. CHLOROPHYLLA Fernald. Somesville; Town Hill; near Jordan Pond; near Northwest Arm, Great Pond.
 ANTENNARIA NEGLECTA Greene. Frequent in fields.
 ANTENNARIA PETALOIDEA Fernald. Bar Harbor; Southwest Harbor.
 Var. SUBCORYMBOSA Fernald. Seal Harbor.
 HELIOPSIS SCABRA Dunal. Bar Harbor (*Kate Furbish*); Seal Harbor. Introduced from farther west.
 HELIANTHUS LAETIFLORUS Pers. Roadsides, Otter Creek (*G. L. S. Jr.*). Escaped from cultivation.
 MATRICARIA SUAVEOLENS (Pursh) Buchenau. A common weed.
 CHRYSANTHEMUM SEGETUM L. Seal Harbor.
 TUSSILAGO FARFARA L. Great Gott Island.
 CIRSIUM MUTICUM Michx. Baker Island.
 CENTAUREA NIGRA L. Seal Harbor.
 Var. RADIATA DC. Seal Harbor.
 CENTAUREA MACULOSA Lam. Beech Hill.
 LAPSANA COMMUNIS L. Seal Harbor; roadside, The Gorge.
 SONCHUS ARVENSIS L. Seal Harbor.
 HIERACIUM PILOSELLA L. Recently introduced, but now widespread.
 HIERACIUM FLORIBUNDUM Wimm. & Grab. Common.
 HIERACIUM PRATENSE Tausch. Too common.
 HIERACIUM MURORUM L. Seal Harbor (*Miss E. L. Shaw*).
 HIERACIUM VULGATUM Fries. Road to Sieur de Monts Spring, Bar Harbor (*G. L. S. Jr.*).

The writer acknowledges with thanks the aid of Professor M. L. Fernald, under whose direction the specimens of the Rand Collection were identified, and of Miss Elsie L. Shaw and Professor Horatio N. Reynolds, who showed the writer some of the stations for the plants listed, from which verification of the records was obtained.

The following are articles in RHODORA and other publications in which additions to the Mt. Desert flora have been published.

CHAMBERLAIN, E. B. Meeting of the Josselyn Botanical Society. RHODORA 10: 172.

FASSETT, N. C. A Plant New to Mt. Desert. *Ibid.* 29: 253.

RAND, E. L. Pinus Banksiana in Eastern Maine. *Ibid.* 1: 135.

Plants from the Duck Islands, Maine. *Ibid.* 2: 207.

Galinsoga in Maine. *Ibid.* 5: 258.

Arceuthobium pusillum at Mt. Desert. *Ibid.* 9: 75.

Additions to the Plants of Mt. Desert Island. *Ibid.* 10: 145.

Subularia aquatica on Mt. Desert Island. *Ibid.* 11: 155.

SHAW, E. L. A New Station for *Iris Hookeri* in Maine. *Ibid.* 10: 145.

TAYLOR, W. R. Additions to the Flora of Mt. Desert, Maine. *Ibid.* 23: 65.

WHERRY, E. T. Wild Flowers of Mt. Desert Island, Maine. Published by the Garden Club of Mt. Desert, 1928.

HARVARD UNIVERSITY.

A NEW ESTUARINE *BIDENS* FROM CHESAPEAKE BAY.

S. F. BLAKE.

THREE species of *Bidens* are now known confined to estuaries along the eastern coast of North America from the Delaware River northward. *Bidens hyperborea* Greene, which has been studied monographically by Dr. N. C. Fassett,¹ is well known from Massachusetts northward, and has recently been reported from the Hackensack marshes of New Jersey.² In its achenial characters it stands apart from the two other species. The more northern of these, *Bidens eatoni* Fernald, ranges in its various forms³ from the Hudson River north to Maine. The more southern species, *Bidens bidentoides* (Nutt.) Britton, was long supposed to be confined to Delaware River and Bay, but is listed also by Fassett,⁴ on the basis of previous records by Stone and Svenson, from the Susquehanna River, the Maurice River of southern New Jersey (which empties into Delaware Bay), and the Hudson River.

In 1926 I collected plentiful specimens of a species of this group at Havre de Grace on the Susquehanna River and at Charlestown, Maryland, the latter a town on Northeast River, the northeasternmost prolongation of Chesapeake Bay. Study of this material, in connection with that in the United States National Herbarium and the Gray Herbarium, has shown that the plant of Chesapeake Bay, while very closely allied to *Bidens bidentoides* of the Delaware system, is constantly different in its shorter awns and pubescent corollas. In *B. bidentoides* the corollas are always glabrous and the achenes are 6.5–12 mm. long and not over 1 mm. wide, with awns 6–9 mm. long and nearly or quite twice as long as the dried disk corollas. In the Chesapeake Bay plant the corollas of both ray and disk are sparsely pilose on the tube, and the achenes are 6–10 mm. long,

¹ RHODORA 27: 166–171. 1925.

² Fassett, Proc. Boston Soc. Nat. Hist. 39: 104. 1928.

³ Fassett, RHODORA 27: 142–146. 1925.

⁴ Proc. Boston Soc. Nat. Hist. 39: 102. 1928.

slightly broader in proportion (1-1.5 mm. wide), and with awns 3-6 mm. long and about equalling or only slightly surpassing the disk corollas. In the Chesapeake plant, moreover, the leaves are in general more sharply toothed, the larger being sometimes laciniate-lobed toward base, and the herbaceous outer phyllaries are generally shorter than in *B. bidentoides*.

In view of these differences, particularly the positive character of pubescence on the corollas, which is not shown by either *B. bidentoides* or the related *B. catoni* in the abundant material examined, I venture to describe the plant of Chesapeake Bay as a new species. Its relationship to *B. bidentoides* is so close that it is evident they have sprung from a common ancestor at no very remote date. Geologists tell us that in late Pleistocene times the peninsula of Maryland and Delaware was entirely submerged by a great depression known as the Wicomico Sea. This was followed by an uplift and then by the Talbot depression, which did not connect the two river systems, a further elevation and slight depression bringing us to the present time. The plant remains recovered from the Wicomico and older formations in this region include species of *Hicoria*, *Populus*, *Carpinus*, *Quercus*, *Ulmus*, *Celtis*, and *Platanus* very closely allied to living species. It is reasonable to suppose that the common ancestor of these species of *Bidens* grew in appropriate situations about the shores of Wicomico Sea, and that divergence of the two forms has taken place since that epoch.

BIDENS mariana Blake, sp. nov. Essentially glabrous annual, about 50-80 cm. high, with usually erect branches; leaves lanceolate, simple, attenuate, sharply serrate or serrulate, occasionally deeply laciniate-lobed toward base, the larger 13-24 cm. long, including the narrowly margined petiole; heads subcylindric or in age subcampanulate, in 2's and 3's at apex of stem and branches, forming a leafy panicle, the larger 18-32-flowered; outer phyllaries 4-5, ob lanceolate or linear-ob lanceolate, often twice as long as the heads; rays when present few, not exceeding disk; disk corollas sparsely pilose on tube; achenes narrowly linear-cuneate, densely antrorse-hirsute, 2(-4)-awned, the inner 8-10 mm. long, their awns slender, 5-6 mm. long.

Stems normally erect, stoutish, usually sparsely pilosulous at base of internodes, leafy; leaves mostly 1.5-3 cm. wide (occasionally 7.5 cm. across the basal lobes), thin, glabrous, the larger sometimes with 1 or 2 lance-linear spreading lobes on each side toward base; disk in flower about 1.5 cm. high, about 7 mm. thick; outer phyllaries loosely erectish, 1.3-3 cm. long, 1.5-4 mm. wide, sometimes minutely

denticulate above, not ciliate; inner phyllaries 9-13 mm. long, pale yellow, densely lined with shining brown except toward margin;



FIG. 1. *Bidens mariana* Blake, from a specimen of the type collection.
Leaf and tip of stem, $\times 1$; disk-achene and corolla, $\times 4$

rays 0-3, not exserted, golden yellow, the tube sparsely pilose, about 1.5 mm. long, the lamina elliptic, tridenticulate, about 6 mm. long; disk corollas 17-31, golden yellow, 4-5-toothed, sparsely pilose on tube with several-celled hairs, 4-5.8 mm. long (tube 1.5-2.3 mm.,

throat subcylindric, 2-2.5 mm., teeth usually somewhat unequal, 0.5-1 mm. long; pales linear, yellow above, with 3 brown vittae, about 1.5 cm. long; ray achenes inane, linear, pubescent like disk achenes, 6 mm. long, 1 mm. wide, their awns 2, upwardly hispid, unequal, 1.2-2 mm. long; outer disk achenes narrowly linear-cuneate, flat, 1-ribbed on middle of each side, dull brownish, densely hirsutulous with subappressed entirely antrorse hairs, 6-6.5 mm. long, 1.2-1.5 mm. wide, 2- or sometimes 4-awned, the longer awns usually subequal, 3-4.5 mm. long, the shorter awns when present 1.5 mm. long or less, all slender and antrorse-hispid; inner achenes similar but longer and narrower, 8-10 mm. long, 1-1.5 mm. wide, the longer awns 5-6 mm. long, the shorter when present up to 3.5 mm. long.

MARYLAND: sandy shore of Northeast River, near Carpenter's Point, Charlestown, 17 Sept. 1926, *Blake* 9698 (TYPE no. 1,365,722, U. S. Nat. Herb.; duplicates in Gray Herb., N. Y. Bot. Gard., Field Mus., etc.); in vegetable refuse at mouth of drain of bog half mile south-southwest of Havre de Grace, 20 Sept. 1902, *G. H. Shull* 399 (U. S.); sandy shore of Susquehanna River, Havre de Grace, 17 Sept. 1926, *Blake* 9703 (U. S., Gray Herb., etc.); sandy shore, Bush River, *Canby* (Gray Herb.).

BUREAU OF PLANT INDUSTRY,
Washington, D. C.

CONSIDERATION OF NOMENCLATURE AT THE FIFTH INTERNATIONAL BOTANICAL CONGRESS

[The following communications from the Executive Committee for the Fifth International Botanical Congress to be held at Cambridge, England, August 16th to August 23rd, 1930, are self-explanatory.—Eps.]

Dear Sir,

The Executive Committee of the Fifth International Botanical Congress will be very grateful if you will kindly publish in your periodical as soon as possible the enclosed notice on the subject of Nomenclature in *one* of the three languages in which the notice is printed.

As the matter is very urgent the Executive Committee trust that you will be able to comply with this request without delay.

Yours faithfully,

F. T. BROOKS
(Secretary)

Motions on the subject of Nomenclature for consideration by the Congress should be in the hand of the Rapporteur général, Dr. John Briquet, before *September 30, 1929*.

Motions must be presented in the form of additional articles (or amendments) to the Rules of 1905–1910, drawn up in the form adopted in the *International Code*, and must be drafted as briefly as possible in Latin, English, French, German, or Italian. At least 100 printed copies must be presented.

According to the decisions of the Brussels Congress 1910, only motions relating to new points which were not settled in 1905 and 1910 can be presented. Motions which do not answer to these conditions shall only be discussed if the Cambridge Congress 1930 decides to take them into consideration.

For further information about the programme of work for nomenclature, apply to the Rapporteur général, Dr. John Briquet, Conservatoire botanique, Geneva (Switzerland).

PROPOSED AMENDMENTS TO THE INTERNATIONAL RULES OF BOTANICAL NOMENCLATURE

presented by

M. L. FERNALD AND C. A. WEATHERBY

I. To add to the list of *Nomina Generica Conservanda* the following:

No.	Fam.	Nomina conservanda	Nomina rejicienda
5 (Christens.)	Polypodiace.	<i>Cystopteris</i> Bernh. Schrad. Journ. i. pt. 2: 5 and 26 (1806). Standard-species: <i>C. fragilis</i> (L.) Bernh.	<i>Filix</i> Adans. Fam. Pl. ii. 20 and 558 (1763); Ludw. Inst. Hist. Phys. Regni Veg. ed. 2: 142 (1757) in part only.
1181	Amaryllidace.	<i>Zephyranthes</i> Herb. App. Bot. Reg. 36 (1821) Standard-species: <i>Z. Atamasco</i> (L.) Herb.	<i>Atamosco</i> Adans. Fam. Pl. ii. 57, 524 (1763).
1559	Orchidace.	<i>Calypso</i> Salisb. Parad. Lond. t. 89 (1807); not Thouars, Hist. Veg. Isles Austr. Afr. i. 33, t. 6 (1805). Standard-species: <i>C. bulbosa</i> (L.) Oakes.	<i>Cytherea</i> Salisb. Trans. Hort. Soc. i. 301 (1812).
1923	Morace.	<i>Broussonetia</i> L'Hér. ex Vent. Tabl. iii. 547 (1799); not Ortega, Nov. Pl. Descr. Decad. 61, t. 7 (1798). Stand-	<i>Papyrius</i> Lam. Illustr. t. 762 (1798).

No.	Fam.	Nomina conservanda ard-species: <i>B. papyri- fera</i> (L.) Vent.	Nomina rejicienda
2884	Cruciferae	<i>Coronopus</i> Gaertn. Fruct. ii. 293 (1791); not Mill. Gard. Dict. Abr. ed. 4 (1754). Standard-species: <i>C. Ruellii</i> Gaertn.	<i>Carara</i> Medic. Pflanzengatt. i. 34 (1792)
3557	Leguminosae	<i>Hoffmanseggia</i> Cav. Ic. iv. 63, t. 392, 391, fig. 1 (1797). Standard-species: <i>H. falcaria</i> Cav.	<i>Larrea</i> Ort. Dec. 15, t. 2 (1797).
3709	Leguminosae	<i>Dalea</i> Juss. Gen. 355 (1789); not Mill. Gard. Dict. Abr. ed. 4 (1754), nor P. Br. Hist. Jam. 239, 314 (1756), nor Gaertn. Fruct. i. 235, t. 51 (1788). Standard-species: <i>D. alopecuroides</i> Willd. (<i>Psoralea Dalea</i> L.).	<i>Parosela</i> Cav. Descr. Pl. 185 (1802).
6200	Ericac.	<i>Lyonia</i> Nutt. Gen. i. 266 (1818); not Raf. Med. Repos. v. 353 (1808); nor Ell. Sk. Bot. S. Car. and Ga. i. 316 (1817). Standard-species: <i>L. ferruginea</i> Nutt.	<i>Xolisma</i> Raf. Am. Mo. Mag. iv. 193 (1819).

II. To add to the list of *Nomina Generica Conservanda* the following, in case the amendment to Art. 50 proposed by Dr. A. S. Hitchcock ("Eliminate the words: or because of the existence of an earlier homonym which is universally regarded as non-valid") is adopted:

No.	Fam	Nomina conservanda	Nomina rejicienda
381	Gramineae	<i>Scolochloa</i> Link, Hort. Berol. i. 136 (1827), not Mert. & Koch, Deutschl. Fl. i. 374, 528 (1823). Standard-species: <i>S. festucea</i> (Willd.) Link.	<i>Flumineae</i> Fries, Sum. Veg. Scand. i. 247 (1846).

No.	Fam.	Nomina conservanda	Nomina rejicienda
3209	Saxifragac.	<i>Jamesia</i> T. & G. Fl. N. Am. i. 593 (1840); not Raf. Atl. Journ. (1832), 145. Standard-species: <i>J. americana</i> T. & G.	<i>Edwinia</i> Heller, Bull. Torr. Bot. Cl. xxiv. 477 (1897).
3448	Leguminosae	<i>Schrankia</i> Willd. Sp. Pl. iv. pt. 2: 1041 (1806); not Medic. Pfl. Gatt. 42 (1792). Standard-sp.: <i>S. quadrivalvis</i> (L.) Merr. (<i>S. aculeata</i> Willd.).	<i>Morongia</i> Britton, Mem. Torr. Bot. Cl. v. 191 (1894).
3973	Zygophyllac.	<i>Larrea</i> Cav. An. Hist. Nat. ii. 119, t. 18, 19 (1800); not Ort. Dec. 15, t. 2 (1797). Standard-species: <i>Larrea nitida</i> Cav.	<i>Covillea</i> Vail, Bull. Torr. Bot. Cl. xxii. 229 (1895).

III. To add to the list of *Nomina Generica Conservanda* the following, in case *DALEA* Juss. (no. 3709) is not conserved:

No.	Fam.	Nomen conservandum	Nomen rejiciendum
7569	Scrophulariac.	<i>Microdon</i> Choisy, Mém. Soc. Phys. Gen. ii. pt. 2, 97 (1823). Standard-species: <i>M. ovatus</i> (L.) Choisy.	<i>Dalea</i> Gaertn, Fruct. i. 235, t. 51 (1788).

DISCUSSION OF THE AMENDMENTS

AMENDMENT I.

5 *Cystopteris* Bernh. Schrad. Journ. i. pt. 2: 5 and 26 (1806).

If *Filix* were universally conceded to be the "name of a class, order, family or genus" (Art. 51) it would be automatically excluded; but it can hardly be considered as technically belonging to this group of names any more than would such names as *Lichen*, *Muscus*, *Gramen* and other equivalents for loosely circumscribed groups. *Filix* Ludw. as diagnosed in his Def. Pl. 140 (1737) covers all forms of bipinnate species of *Polystichum*, *Athyrium*, *Thelypteris* (*Dryopteris*) and *Cystopteris*; it can hardly be typified because of entire lack of citations and it might be treated as a *nomen confusum*. *Filix* Adans. seems to rest chiefly on *Cystopteris*. Although he cited numerous synonyms of Dioscorides and others, the only clearly identifiable synonym was *Filix baccifera* Cornut (*Cystopteris bulbifera*), which was accompanied by a recognizable plate. Mackenzie, Am. Fern. Journ. xv. 40-45 (1925) makes out that *Filix* Ludw. equals *Pteris* L. Under this interpretation *Filix* Adans. would be freed for use under the International Rules as they stand. *Cystopteris* has

been almost universally used; *Filix* has been generally substituted by followers of the American Code since Underwood took it up in 1900. In order that there be no further misunderstanding, we move the conservation of *Cystopteris*.

1181 *Zephyranthes* Herb. App. Bot. Reg. 36 (1821).

Zephyranthes Herb. (1821) has been almost universally used for the ornamental genus of *Amaryllidaceae* much in cultivation. It is antedated by *Atamosco* Adans. (1763), a name first taken up after Adanson's publication by Greene, *Pittonia*, iii. 187 (May, 1897), although, in 1825, Rafinesque had independently published *Atamasco* Raf. Neog. 3 (1825), based on the same type as *Atamosco*. *Atamosco* has been taken up in America since 1897. If it is desired to retain the better known name, *Zephyranthes*, it will be necessary to conserve it. We move that *Zephyranthes* be conserved.

1559 *Calypso* Salisb. Par. Lond. pl. 89 (1807).

Calypso Salisb. has been very generally used for more than a century for a familiar orchid of boreal regions. In 1905, House, *Bull. Torr. Bot. Cl.* xxxii. 382 (1905) set it aside because of the earlier *Calypso* Thouars (1805) and took up *Cytherea* Salisb. (1812), a name subsequently adopted by Britton and some others in American. *Calypso* Thouars was reduced to *Salacia* L. (1771) by De Candolle in 1824, but it was maintained as a genus by G. Don, *Gen. Syst.* i. 629 (1831) and by Martius, *Flora*, xx. pt. 2, Beibl. 96 (1837). Subsequent authors seem consistently to have reduced *Calypso* Thouars to *Salacia*. At present *Calypso* Salisb. is invalid under any code and, if it is desired to retain it, it should be made a *nomen conservandum*. We move the conservation of *Calypso*.

1923 *Broussonetia* L'Hér. ex Vent. Tabl. iii. 547 (1799).

Broussonetia L'Hér. has been almost universally used for the moraceous genus well known economically and as cultivated trees, but it is antedated by one year by *Papyrius* Lam. (1798). *Papyrius* was used by Cav. Descr. (1802) but was apparently not taken up by subsequent authors until revived by Kuntze, *Rev. Gen.* 629 (1891). *Broussonetia* Ortega (1798) has apparently not been recognized by subsequent authors and by both Pfeiffer and Dalla Torre & Harms is cited as belonging to *Sophora* L. (1753). If *Broussonetia* L'Hér. is to be maintained it must be specially conserved. We move its conservation.

2884 *Coronopus* Gaertn. Fruct. ii. 239 (1791).

Coronopus Mill. (1754) was based on species of *Plantago* L. (1753), which are ordinarily retained under *Plantago*. While Miller's genus has only rarely been taken up, it has clear priority over *Coronopus* Gaertn. (1791). If the latter is to be maintained it will be necessary specially to conserve it. We move the conservation of *Coronopus* Gaertn.

3557 *Hoffmanseggia* Cav. Ic. iv. 63, pl. 392, 391, fig. 1 (1797).

Although *Hoffmanseggia* and *Larrea* Ort. (1797) were published in the

same year, Cavanilles admitted, in publishing *Hoffmanseggia*, that he was renaming *Larrea* Ort. *Hoffmanseggia* is, therefore, later and technically invalid. It has, however, been universally used for a well known and rather large leguminous genus and *Larrea* Ort. has not been taken up, although Briquet, Schröt. Festschr. 656 (1925) points out that it is the valid name for *Hoffmanseggia*. The name *Larrea* Cav. (1800) has for more than 125 years been generally applied to a genus of the *Zygophyllaceae* (see No. 3973). To overthrow *Hoffmanseggia* for *Larrea* Ort. would create needless confusion. *Hoffmanseggia* should, therefore, be conserved.

3709 *Dalea* Juss. Gen. 355 (1789).

Dalea Mill. (1754) is a direct renaming of *Browallia* L. (1753) and may be neglected as an absolute synonym under the International Rules as they stand. *Dalea* P. Br. (1756) was used for plants of two entirely different groups. On p. 239 he had a *Dalea* 1, perhaps myrtaceous, a tree of Jamaica, but without generic diagnosis or specific name; but on p. 314 he had another *Dalea* 1, again without generic diagnosis and in the caption of the plate called *Eupatorium Dalea*. Neither of the uses of *Dalea* by Browne is valid and his names have no nomenclatorial status. *Dalea* Gaertn. (1788) was absorbed by Choisy into his *Microdon*, Mém. Soc. Phys. Gen. ii. pt. 2: 97 (1823). *Microdon* has been taken up by Endlicher, Bentham & Hooker and Wettstein, although it is greatly antedated by *Dalea* Gaertn., which was perfectly valid for the genus. *Dalea* Juss. (1789), however, has been generally used for a genus of *Leguminosae*, a genus of 150 ± species, but in 1894 it was abandoned by Britton in favor of *Parosela* Cav. (1802). Because of the confusion which would arise if the name *Dalea* were now transferred to *Microdon*, the late S. B. Parish (Bot. Gaz. lv. 301 (1913)) has recommended that *Dalea* Juss. be conserved.

6200 *Lyonia* Nutt. Gen. i. 266 (1818).

Xolisma Raf. (1819) was a direct renaming of *Lyonia* Nutt., because of the earlier *Lyonia* Raf. (1808). *Lyonia* Raf. (1808) was a direct renaming of *Polygonella* Michx. (1803), a change made simply because Rafinesque considered Michaux's name inappropriate. It is, therefore, absolutely invalid. *Lyonia* Ell. (1817) is, according to Rehder, Journ. Arn. Arb. v. 49 (1924), the earliest and, therefore, the valid name for the asclepiadaceous genus *Seutera* Reichenb. Consp. 131 (1828), a genus not maintained by most monographers of the *Asclepiadaceae*. *Lyonia* Ell. (1817) has not been used by those who do recognize the genus *Seutera*. *Lyonia* Nutt. (1818), on the other hand, has been used by Sprengel, Endlicher, DeCandolle, Bentham & Hooker, Drude in Engler & Prantl and others. *Xolisma* Raf. (1819) was revived by Britton, Mem. Torr. Bot. Cl. iv. 135 (1894) and is used by followers of the American Code and recently by Rehder. The use of the technically correct name *Lyonia* Ell. for *Seutera* would create confusion not only in the *Asclepiadaceae*, but in the *Ericaceae*. We move the conservation of *Lyonia* Nutt.

Ital.

AMENDMENT II.

381 *Scolochloa* Link, Hort. Berol. i. 136 (1827).

Scolochloa Mert. & Koch (1823) was based on *Arundo Donax* L.; but, if Professor Hitchcock's amendment as to homonyms is adopted, *Scolochloa* Link, the name of a well known northern grass, will have to give way to *Fluminea* Fries, unless *Scolochloa* is specially conserved.

3209 *Jamesia* T. & G. Fl. N. Am. i. 593 (1840).

Jamesia Raf. (1832) was based on *Psoralea Jamesii* Torr., which is generally kept in the genus *Dalea* Juss. (1789) or *Parosela* Cav. (1802) —see No. 3709. Rafinesque's *Jamesia* has been taken up by no subsequent author; but *Jamesia* T. & G. (1840) is a generally used name for a genus of shrubs of North America with one species widely known in cultivation as *Jamesia*. If *Jamesia* T. & G. is to be maintained it will be necessary specially to conserve it, at least if Dr. Hitchcock's amendment as to homonyms is adopted. In that case we should move the conservation of *Jamesia* T. & G.

3448 *Schrankia* Willd. Sp. Pl. iv. pt. 2: 1041 (1806).

Schrankia Willd. (1806) is a familiar tropical genus, which had almost universally been known by that name when, in 1894, Britton substituted for it the name *Morongia*, because of *Schrankia* Medic. (1792). *Schrankia* Medic. (1792) was based on *Myagrum rugosum* L., a species referable to *Rapistrum* Medic. (1794). No one but Moench (1794) seems to have taken up *Schrankia* Medic. If, however, *Schrankia* Willd. is to be maintained for the genus of the *Mimosoideae* it will be necessary specially to conserve it, at least if Dr. Hitchcock's amendment as to homonyms is adopted. In that case we should move the conservation of *Schrankia* Willd.

3973 *Larrea* Cav. An. Hist. Nat. ii. 119, pl. 18, 19 (1800).

Even though *Larrea* Ort. (1797) may be eliminated by the conservation of *Hoffmanseggia* (see No. 3557), *Larrea* Cav. (1800) would be abandoned or would have to be conserved, if Dr. Hitchcock's amendment as to homonyms is adopted. (See Briquet. Schröt. Festschr. 659 (1925)). In that case we should move the conservation of *Larrea* Cav.

AMENDMENT III.

7569 *Microdon* Choisy, Mém. Soc. Phys. Gen. ii. pt. 2: 97 (1823).

If *Dalea* Juss. (see No. 3709) is not conserved, *Dalea* Gaertn. (1788) must replace *Microdon* Choisy (1823) unless the latter is conserved.

GRAY HERBARIUM

Harvard University.

CHAMAECYPARIS THYOIDES IN NEW HAMPSHIRE.

H. K. SVENSON.

DURING the last week in September, 1928, the writer, while returning from the White Mountains, with a few hours at his disposal,

went to Black Pond in the almost deserted township of Windsor, New Hampshire, where "cedar" was said by the inhabitants to grow in large quantities. Since *Thuja occidentalis* in this part of New Hampshire is known only from the calcareous region bordering the Connecticut River, it was hardly to be expected in the swamps bordering the black waters of a typical mountain pond in an acid area. The "cedar" turned out to be *Chamaecyparis thyoides*. The trees in the main swamp, which was said to cover more than a square mile, had in large part been killed by flooding, but many of the trees had been cut for telegraph poles and shingles.

The township of Windsor is bordered on the northwest by Washington and at East Washington, *Rynchospora Torreyana*, a rare sedge of Cape Cod, Rhode Island and the New Jersey pine barrens, was at one time collected. Accordingly, Professor Fernald and I set out from Cambridge a few days later, hoping to find the station for *Rynchospora Torreyana* associated with *Chamaecyparis* and all the other coastal-plain plants which would of course accompany these. After the usual vicissitudes of travel by Ford, we spent the night in a small hotel at Washington, and the next day in trying to locate a *Chamaecyparis* swamp in Washington or a pond with an extensive sand beach which might harbor our *Rynchospora*. Relying upon hearsay and a map we visited one pond after another. These all seemed to be at an approximate elevation of 1500 feet, always at the tops of extremely steep hills, which abounded in this region; the vegetation of *Picea rubra*, *Betula lutea*, and *Betula papyrifera* suggesting anything but coastal-plain affinity. However, we collected *Hippuris vulgaris* at Long Pond, the southernmost station known in New England. Late in the afternoon we gave up the *Chamaecyparis*, except for the avowed intention of stripping bark from one of the cedar telegraph poles along the road, for an herbarium specimen. These poles were becoming the sole proof to Professor Fernald that I had ever seen the tree, and even then they might have been imported, when just as we crossed from East Washington into the township of Bradford we found ourselves in the midst of a *Chamaecyparis* swamp. Our search here for *Rynchospora Torreyana* was cut short, for we figured that we had just time to reach Bradford Pond before dark—on the shores of which had been collected another famous coastal-plain plant, *Sclerolepis verticillata*, known otherwise in New England only from Wallum Pond on the boundary

of Massachusetts and Rhode Island, and extending southward from the New Jersey pine barrens. At Bradford Pond we found *Sclerolepis* growing in water with the boreal *Subularia aquatica*. Here the *Sclerolepis* was submersed and sterile, but farther along the sandy beach we found a few specimens in flower. This beach is the most extensive that I have seen on any pond, but was disappointing in the scarcity of coastal-plain plants. The shore is lined with a magnificent growth of *Pinus resinosa* and not *P. rigida* as was noted by Lewis, RHODORA vii. 186 (1905). By this time darkness had set in and our groping for specimens in the dim twilight ceased.

About the middle of November I had the opportunity of going to this region again, and noted a few *Chamaecyparis* trees at Bagley's Pond in Windsor, about two miles southeast of Black Pond, and about four miles south of the Bradford locality. The altitude of Bagley Pond is about 1200 feet, of Black Pond about 1000 feet, and of the Bradford station for *Chamaecyparis* about 800 feet. According to Sargent, N. Am. Silva x. 112 (1896), *Chamaecyparis thyoides* ranges from southern Maine to northern Florida. In a footnote he mentions that the highest elevation at which it has been reported is at High Point, New Jersey, where it grows in a cold deep swamp at an elevation of 1500 feet. Apparently it behaves similarly in New Hampshire. Sargent, Man. Trees ed. 2. 76 (1922), mentions its occurrence "near Concord, New Hampshire." Except for a specimen collected by C. F. Batchelder at Hancock, New Hampshire, which is less than ten miles south of Windsor, and which can be considered a part of the Bradford-Windsor area, and two specimens from the vicinity of Manchester (Chester, C. C. Forsaith, and Manchester, W. H. Huse, "25 miles north of Massachusetts and 50 miles west of the sea-coast"), it is represented in the Gray Herbarium and the Herbarium of the New England Botanical Club from the following northern limits: Lyman and Alfred in York County, Maine; to Rye, New Hampshire; thence to Andover, Bedford, Concord, Westboro, Hopkinton, Monson, and Springfield in Massachusetts; to Willington, Southington, and Wolcott in Connecticut. It very probably reaches the Windsor region through the lowland extending northward from Massachusetts and to the east of Mt. Monadnock.

CAMBRIDGE, MASSACHUSETTS.

TWO NEW PLANT RECORDS FOR THE CHICAGO REGION.—In September, 1928, while collecting on the moorlands about Waukegan, Illinois, I discovered an unusual form of the choke cherry. Growing in sandy soil, in a mixed thicket of shrubbery and vines, there was a colony of at least three or four bushes, averaging three feet in height. They were loaded with fruit which immediately attracted attention because, although evidently ripe, it was amber-colored instead of the usual dark color of this species. Upon consulting Gray's Manual, I found that the plant was *Prunus virginiana* L., var. *leucocarpa* Wats.,¹ collected first at Dedham, Massachusetts, and recorded also from Maine, Connecticut, and New York, but unknown previously from the Central States.

In July, at Mineral Springs, Porter County, Indiana, near the shore of Lake Michigan, I found a bush of the common black raspberry the ripe fruit of which was pale yellow or amber. The shrub grew on the side of a thinly wooded sand dune. This well-marked color form is *Rubus occidentalis* L., f. *pallidus* (Bailey) Robinson, and constitutes another new record for the sand dunes and for the Chicago region. The form seems to have been found rather widely in the eastern United States, being reported from New England, New York, Delaware, and Kentucky, and by Deam from Lagrange and Owen counties, Indiana.

Specimens of both of these plants are deposited in the herbarium of Field Museum of Natural History.—NELLIE V. HAYNIE, Chicago.

ANTHESIS IN *SPARTINA CYNOSUROIDES*.—Professor Fernald, while collecting on Cape Cod on August 26, 1928, with J. M. Fogg, Jr., Paul Bowman, and the writer, called attention to the peculiar character of a colony of *Spartina cynosuroides* growing in the salt marsh at East Sandwich. In this colony some of the inflorescences were perfect while others appeared wholly pistillate or staminate, or variously unisexual. Such a situation is unusual in the grasses, and material was collected for examination. Upon dissection it was found that all spikelets had both stamens and pistils, but that the pistils matured much earlier. In such cases the plants with stigmas exerted would have the appearance of being wholly pistillate, the

¹ Since this plant differs from the typical form only in the color of fruit, it is better that it be considered a form rather than a variety:

P. VIRGINIANA L., f. *leucocarpa* (Wats.), comb. nov. *P. virginiana* var. *leucocarpa* Wats. Bot. Gaz. xiii, 233 (1888).

stamens delayed in anthesis being still included within the lemma. It is possible that the stamens in such cases might remain permanently enclosed. Most grasses are characterized by the early extrusion of the anthers, but the condition in which the stigmas are the first to be developed, known as *proterogyny*, is stated by Hackel¹ to occur strongly in *Anthoxanthum*, *Pennisetum*, and *Spartina*. *Spartina cynosuroides* is rare in New England, the previously known stations (excluding Connecticut) being at Brewster and Dennis in Barnstable County, Wareham in Plymouth County, and Salisbury in Essex County, Massachusetts.—H. K. SVENSON, Cambridge, Mass.

A NEW VARIETY OF *BIDENS EATONI*.—

BIDENS EATONI Fernald var. *illicita*, var. nov. Larger heads campanulate, 30–32-flowered; outer achenes 6–7 mm. long, 2 mm. wide, 2-awned, inner achenes 6.8–7.5 mm. long, 1.5–1.8 mm. wide, 2–3-awned, the marginal hairs all antrorse except rarely one or two at extreme base; awns 2.8–3.7 mm. long, barbed both ways, upward at base, downward or both ways in middle, upward or downward at apex.—MASSACHUSETTS: Tidal shore of Merrimac River, Amesbury, 22 Sept., 1928, Blake 10784A (TYPE in U. S. National Herbarium, no. 1,365,546).

Of this form only a single plant was found, so robust that it provided material for about ten sheets. Its characters, in connection with its occurrence in company with typical *Bidens eatoni* Fernald with downwardly barbed awns and var. *fallax* Fernald with upwardly barbed awns, might lead to the suspicion that it represented a hybrid between them. The only other form of *Bidens eatoni* with awns barbed in both directions, var. *mutabilis* Fassett² from the Kennebec River, Maine, is, however, found in a region where no other form of the species except one with downwardly barbed awns is known to occur. Var. *mutabilis*, of which I have examined the type material in the Gray Herbarium, differs from var. *illicita* in its very short awns (only 0.5–2 mm. long) and in the fact that the angles of the achene are barbed both retrorsely and antrorsely.—S. F. BLAKE, Bureau of Plant Industry, Washington, D. C.

¹ Hackel, *The True Grasses*, transl. Scribn. & Southw. 18 (1890).

² RHODORA 27: 143. 1925.

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